REMARKS

Claims 1-4, 6-10, 41, 46-53 and 60-81 are pending in the application and were rejected in an Office Action dated March 8, 2006 ("Office Action"). Claims 1, 3, 41, 47, 62, and 72 were amended. No new matter has been added with the amendments. Claims 58 and 59 were cancelled. Applicant respectfully requests reconsideration of the rejections in view of the following remarks.

Section 102 Rejections

Claims 1-4, 7, 9, 10, 41, 46-48, 50, 52, 53, and 60-80 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,994,853 ("*Ribbe*"). The *Ribbe* reference teaches a remote-control toy vehicle that includes a battery electronically coupled to a motor through a speed control system (*Ribbe*, col. 3, lines 13-15). The described remote-control toy vehicle includes an antenna that receives a digital speed control signal from an operator-controlled transmitter unit and delivers the received signal to the speed control system (*Ribbe*, column 3, lines 23-25). The speed control system decodes the received signal to identify which one of a multiplicity of possible speed control states is being requested by the operator (*Ribbe*, column 3, lines 23-27).

Claim 1 recites a method for controlling acceleration of a toy vehicle. Toy vehicles, as described in the Applicant's Specification, generally include ride-on and ride-in vehicles, including but not limited to, automobiles, trucks, boats, airplanes, scooters, etc. (Applicant's Specification, page 2, lines 10-14). Claim 1 has been amended to further draw attention to the recitation of a toy vehicle that uses a throttle switch controlled by a person in physical contact with the toy vehicle. Claim 1 also recites:

> detecting a change in a throttle signal from a first level to a second level or from the second level to the first level, the throttle signal operable to induce motion via a motor operating as a drive mechanism of the toy vehicle in response to a throttle switch controlled by a person in physical contact with the toy vehicle, wherein the first level corresponds to the throttle signal produced when the person engages the

throttle switch, and wherein the second level corresponds to the throttle signal produced when the person disengages the throttle switch; and

generating a transition signal based on the change in the throttle signal.

The *Ribbe* reference does not teach methods of controlling acceleration of a toy vehicle and/or a throttle signal in response to a throttle switch controlled by a person in physical contact with a toy vehicle. Instead, the *Ribbe* reference teaches remotely controlling a toy.

Furthermore, claim 1 recites a first level corresponds to a throttle signal produced when a person engages a throttle switch and a second level corresponds to a throttle signal produced when a person disengages a throttle switch. The *Ribbe* reference teaches a remote controlled vehicle with multiple possible speed control states.

The toy industry and makers of toy vehicles are very cost sensitive due to consumer pricing demands and productions costs. (Applicant's Specification, page 4, lines 20-22). Thus, to reduce costs and meet pricing demands, it is desirable to produce toy vehicles in which engaging a throttle switch causes a signal at a first level (e.g., a vehicle receives power corresponding to a first level when a throttle switch is engaged). When a toy vehicle is only provided with one signal level produced when a throttle switch is engaged, as in claim 1, safety issues for a person operating a toy vehicle and wear on mechanical parts of a toy vehicle are concerns.

Safety is a concern when a toy vehicle is provided with one power level. Since people are in physical contact with toy vehicles, as opposed to the remote control vehicles described in the *Ribbe* reference, it is important to reduce the chance that a toy vehicle might flip. Toy vehicles may flip or turnover due to excessive acceleration when a power level is suddenly delivered to a toy vehicle that is not moving (Applicant's Specification, page 6, lines 3-5). By generating a transition signal that is an intermediate signal, as in claim 1, excessive acceleration can be reduced.

Additionally, excessive acceleration may cause wheels of a toy vehicle to lose traction, especially on wet surfaces. Toy manufacturers have also been developing toy vehicles with more speed and power thereby resulting in the exacerbation of these problems (Applicant's Specification, page 6, lines 6-12). Wheel traction for a toy vehicle is an important safety concern since a loss in traction may also result in a toy vehicle becoming uncontrollable for an operator and passengers. By generating a transition signal, as in claim 1, excessive acceleration of a toy vehicle with one signal level produced by engaging a throttle switch can be reduced.

Sudden changes in power level caused by a person engaging a throttle switch that produces a signal at one level, can also wear out motors, gears, and other mechanical parts of a toy vehicle (see Applicant's Specification, page 5, line 5-page 6, line 2). By generating a transition signal, as in claim 1, that is an intermediate signal, wear on mechanical parts can be reduced.

Accordingly, safety and mechanical wearing concerns exist for toy vehicles in which engaging a throttle switch produces a signal level. Due to cost demands of the industry, increasing safety and lifespan of toy vehicles within the context of less expensive switches are desirable, as opposed to the more expensive variable speed control systems as described by the *Ribbe* reference, and thus solutions provided for variable speed systems are not applicable. Accordingly, claim 1 and the claims dependent thereon are allowable over the cited art.

Claim 4 recites a motor includes a high and low terminal and a transition signal is applied to a low terminal of a motor. The *Ribbe* reference does not teach or suggest applying a transition signal to a low terminal of a motor, nor does the Office Action include a citation to any portion of the reference that is asserted to teach such a limitation. Accordingly, claim 4 is further allowable over the cited art.

Claim 10 recites receiving a shift signal indicative of an activation of a control for changing a direction of motion for a toy vehicle, and responsive to a shift signal, and if power is being applied to the motor, initiating a delay and applying a transition signal to a motor. *Ribbe*

does not teach or suggest initiating a delay in response to a shift signal indicating a change of direction of motion for a toy vehicle. *Ribbe* teaches using a filter to prevent switching between multiple (e.g., three or more) consecutive speed control states (e.g., a PWM signal has a duty cycle of about 100 percent in response to a full forward throttle speed control state, a PWM signal has a duty cycle of about 80 percent in response to a medium forward speed control state, and a PWM signal has a duty cycle of about 40 percent in response to a minimum forward speed control state) too quickly (*Ribbe*, column 6, lines 49-51). Accordingly, claim 10 is further allowable over the cited art.

Independent claims 41, 62, and 72 recite limitations similar to that of claim 1. In particular, the claims recite a throttle signal in response to a throttle switch controlled by a person in physical contact with the toy vehicle. Accordingly, for reasons stated above in connection with claim 1, claims 41, 62, and 72 and their respective dependent claims are also allowable over the cited art.

Claim 48 includes similar limitations to those of claim 4 and is further allowable over the cited art for the reasons discussed above in connection with claim 4.

Claim 53 includes similar limitations to those of claim 10 and is further allowable over the cited art for the reasons discussed above in connection with claim 10.

Claim 60, which depends from claim 41, recites instructions that cause a processor to detect a change in a throttle signal from a second level to a first level followed by a second change in a throttle signal from a first level to a second level within a predetermined time. Claim 60 also recites, a second transition signal is generated in response to detecting a second change within a predetermined time of detecting a change from a second level to a first level, and a second transition signal is operable to ramp up power to a motor starting from a power level that depends on a time duration between the change from the second level to the first level and the second change. The *Ribbe* reference does not teach or suggest the limitations of claim 60, nor

does the Office Action include a citation to any portion of the reference that is asserted to teach such limitations. Accordingly, claim 60 is further allowable over the cited art.

Claim 67, which depends on claim 62, recites generating a transition signal comprises delaying applying power to a motor in response to a shift signal for changing a direction of motion for a toy vehicle. Claim 67 has similar limitations to those of claim 10 and is further allowable over the cited art for the reasons discussed above in connection with claim 10.

Claim 69 recites the first power level is determined in accordance with an algorithm that decreases a first power level with increasing amounts of time between a change from a high signal to a low signal and a change from a low signal to a high signal. The *Ribbe* reference does not teach or suggest the limitations of claim 69, nor does the Office Action include a citation to any portion of the reference that is asserted to teach such limitations. Accordingly, claim 69 is further allowable over the cited art.

Claim 76 recites that generating a transition signal to cause a delay in applying a maximum power level to a motor comprises delaying applying power to a motor in response to a shift signal operable to effect a change in a direction of motion for a toy vehicle. For the reasons stated above in connection with claim 10, the *Ribbe* reference does not teach or suggest this limitation. Accordingly, claim 76 is further allowable over the cited art.

Claim 78 includes similar limitations to those of claim 69 and is further allowable over the cited art for the reasons discussed above in connection with claim 69.

Claims 1-4, 7, 9, 10, 41, 46, 48, 50, 52, 53, 58-65, 67-69, and 71-80 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 3,732,751 ("*Berman et al.*"). The *Berman* reference teaches mechanical power transmissions for use in ground transportation vehicles such as personal or mass transit vehicles (see column 1, lines 11-14). The power in the described transmission varies directly with speed (see column 4, lines 3-4).

Claim 1 recites a method for controlling acceleration of a toy vehicle. Toy vehicles, as discussed above, generally include ride-on and ride-in vehicles, including but not limited to, automobiles, trucks, boats, airplanes, scooters, etc. (Applicant's Specification, page 2, lines 10-14). Claim 1 also includes, in part, generating a transition signal based on the change in the throttle signal. The *Berman* reference is not directed to toy vehicles nor does it teach or suggest generating a transition signal based on a change in a throttle signal. The Office Action also does not include a citation to any portion of the reference that is asserted to teach such a limitation. Accordingly, claim 1 is allowable over the cited art.

Claim 2 recites a transition signal comprises a pulse width modulation signal having a plurality of different duty cycles, each different duty cycle comprising a signal level of a transition signal. The *Berman* reference does not teach or suggest the limitations of claim 2, nor does the Office Action include a citation to any portion of the reference that is asserted to teach such limitations. Accordingly, claim 2 is further allowable over the cited art.

Claim 3 depends on claim 2 and recites a pulse width modulation ranges from approximately a 20 percent to approximately a 100 percent duty cycle. The *Berman* reference does not teach or suggest the limitations of claim 3, nor does the Office Action include a citation to any portion of the reference that is asserted to teach such limitations. Accordingly, claim 3 is further allowable over the cited art.

Claim 4 recites wherein a motor includes a high and low terminal and a transition signal is applied to a low terminal of a motor. The *Berman* reference does not teach or suggest the limitations of claim 4, nor does the Office Action include a citation to any portion of the reference that is asserted to teach such limitations. Accordingly, claim 4 is further allowable over the cited art.

Claim 7 recites a transition signal ramps power to a motor. The *Berman* reference does not teach or suggest the limitations of claim 7, nor does the Office Action include a citation to

any portion of the reference that is asserted to teach such limitations. Accordingly, claim 7 is further allowable over the cited art.

Claim 9 recites a change in a throttle signal from a first level to a second level comprises a binary step function and a transition of a transition signal occurs over a time span of at least one second. The *Berman* reference does not teach or suggest the limitations of claim 9, nor does the Office Action include a citation to any portion of the reference that is asserted to teach such limitations. Accordingly, claim 9 is further allowable over the cited art.

Claim 10 recites receiving a shift signal indicative of an activation of a control for changing a direction of motion for a toy vehicle, and responsive to a shift signal, and if power is being applied to the motor, initiating a delay and applying a transition signal to a motor. The *Berman* reference does not teach or suggest the limitations of claim 10, nor does the Office Action include a citation to any portion of the reference that is asserted to teach such limitations. Accordingly, claim 10 is further allowable over the cited art.

Independent claims 41, 62, and 72 recite limitations similar to that of claim 1. In particular, the claims recite generating a transition signal based on the change in a throttle signal. Accordingly, for reasons stated above in connection with claim 1, claims 41, 62, and 72 and their respective dependent claims are also allowable over the cited art.

Claim 46 includes similar limitations to those of claim 2 and is further allowable over the cited art for the reasons discussed above in connection with claim 2.

Claim 48 includes similar limitations to those of claim 4 and is further allowable over the cited art for the reasons discussed above in connection with claim 4.

Claim 50 includes similar limitations to those of claim 7 and is further allowable over the cited art for the reasons discussed above in connection with claim 7.

Claim 52 includes similar limitations to those of claim 9 and is further allowable over the cited art for the reasons discussed above in connection with claim 9.

Claim 53 includes similar limitations to those of claim 10 and is further allowable over the cited art for the reasons discussed above in connection with claim 10.

Claim 60 recites generating a second transition signal in response to detecting a second change within a predetermined time of detecting the change from a second level to a first level, a second transition signal operable to ramp up power to a motor starting from a power level that depends on a time duration between a change from a second level to a first level and a second change. The *Berman* reference does not teach or suggest the limitations of claim 60, nor does the Office Action include a citation to any portion of the reference that is asserted to teach such limitations. Accordingly, claim 60 is further allowable over the cited art.

Claim 61 depends on claim 60 and recites power to a motor is ramped up by increasing a duty cycle of a pulse width modulation. The *Berman* reference does not teach or suggest the limitations of claim 61, nor does the Office Action include a citation to any portion of the reference that is asserted to teach such limitations. Accordingly, claim 61 is further allowable over the cited art.

Claim 65 recites wherein a transition signal comprises a pulse width modulated signal. The *Berman* reference does not teach or suggest the limitations of claim 65, nor does the Office Action include a citation to any portion of the reference that is asserted to teach such limitations. Accordingly, claim 65 is further allowable over the cited art.

Claim 67, which depends on claim 62, recites generating a transition signal comprises delaying applying power to a motor in response to a shift signal for changing a direction of motion for a toy vehicle. Claim 67 has similar limitations to those of claim 10 and is further allowable over the cited art for the reasons discussed above in connection with claim 10.

Claim 68 recites generating a transition signal comprises generating a transition signal operable to increase power applied to a motor over a period of time from a first power level to a second power level, wherein a first power level depends upon an amount of time between a change from a high signal to a low signal and a change from a low signal to a high signal. The *Berman* reference does not teach or suggest the limitations of claim 68, nor does the Office Action include a citation to any portion of the reference that is asserted to teach such limitations. Accordingly, claim 68 is further allowable over the cited art.

Claim 69 recites a first power level is determined in accordance with an algorithm that decreases a first power level with increasing amounts of time between the change from a high signal to a low signal and a change from a low signal to a high signal. The *Berman* reference does not teach or suggest the limitations of claim 69, nor does the Office Action include a citation to any portion of the reference that is asserted to teach such limitations. Accordingly, claim 69 is further allowable over the cited art.

Claim 71 depends on claim 62 and recites a power level associated with a binary throttle signal comprises a voltage with a one hundred percent duty cycle. The *Berman* reference does not teach or suggest the limitations of claim 71, nor does the Office Action include a citation to any portion of the reference that is asserted to teach such limitations. Accordingly, claim 71 is further allowable over the cited art.

Claim 74 recites generating a transition signal to cause a delay in applying to a motor a maximum power level comprises generating a transition signal operable to increase power applied to a motor over a period of time from a first power level to a maximum power level. The *Berman* reference does not teach or suggest the limitations of claim 74, nor does the Office Action include a citation to any portion of the reference that is asserted to teach such limitations. Accordingly, claim 74 is further allowable over the cited art.

Claim 75 includes similar limitations to those of claim 65 and is further allowable over the cited art for the reasons discussed above in connection with claim 65.

Claim 76 recites wherein generating a transition signal to cause a delay in applying to a motor a maximum power level comprises delaying applying power to a motor in response to a shift signal operable to effect a change in a direction of motion for a toy vehicle. For the reasons stated above in connection with claim 10, the *Ribbe* reference does not teach or suggest this limitation. Accordingly, claim 76 is further allowable over the cited art.

Claim 77 recites wherein generating a transition signal to cause a delay in applying to a motor a maximum power level comprises generating a transition signal operable to increase power applied to a motor over a period of time from a first power level to a maximum power level, wherein a first power level depends upon an amount of time between a change from an activation level to a deactivation level and the change from a deactivation level to an activation level. The *Berman* reference does not teach or suggest the limitations of claim 77, nor does the Office Action include a citation to any portion of the reference that is asserted to teach such limitations. Accordingly, claim 77 is further allowable over the cited art.

Claim 78 includes similar limitations to those of claim 69 and is further allowable over the cited art for the reasons discussed above in connection with claim 69.

Claim 79 depends on claim 78 and recites an algorithm provides a linearly decreasing first power level with increasing amounts of time between the change from an activation level to a deactivation level and a change from a deactivation level to an activation level. The *Berman* reference does not teach or suggest the limitations of claim 79, nor does the Office Action include a citation to any portion of the reference that is asserted to teach such limitations. Accordingly, claim 79 is further allowable over the cited art.

Claim 80 recites applying power to a motor in accordance with a transition signal comprises applying a pulse width modulated voltage with an increasing duty cycle to a motor. The *Berman* reference does not teach or suggest the limitations of claim 80, nor does the Office Action include a citation to any portion of the reference that is asserted to teach such limitations. Accordingly, claim 80 is further allowable over the cited art.

Section 103 Rejections

Claims 6, 8, 49, and 51 stand rejected under 35 U.S.C. § 103(a) as being anticipated by *Ribbe* in view of U.S. Patent No. 5,056,613 ("*Porter et al.*"). For the reasons discussed above in connection with claim 1, *Ribbe* does not teach or suggest all the limitations of the claims, such as, for example, methods of controlling acceleration of a toy vehicle and receiving a throttle signal from an operator in physical contact with a toy vehicle. In addition, the *Porter* reference also fails to teach at least these features of the claims. The Office Action also does not include a citation to any portion of the *Porter* reference that is asserted to teach such limitations. Accordingly, the claims are allowable over the cited art.

Claims 6, 8, 49, 51, and 70 stand rejected under 35 U.S.C. § 103(a) as being anticipated by *Berman* in view of *Porter*. For the reasons discussed above in connection with claim 2, *Berman* does not teach or suggest all the limitations of the claims, such as, for example, methods of controlling acceleration of a toy vehicle and receiving a throttle signal from an operator in physical contact with a toy vehicle. In addition, the *Porter* reference also fails to teach at least these features of the claims. The Office Action also does not include a citation to any portion of the *Porter* reference that is asserted to teach such limitations. Accordingly, the claims are allowable over the cited art.

CONCLUSION

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

An Petition for a Three-Month Extension of Time with the required $1,020.00 filing fee is being filed concurrently with this Amendment in Reply to Action of March 8, 2006. If any additional extension of time is required, Applicant hereby requests the appropriate extension of time. Please apply any charges or credits to deposit account 06-1050.

Respectfully submitted,

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